ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Section 73.622(b)	)	MM Docket No. 00-138
Table of Allotments	)	RM-9896
Digital Television Broadcast Stations.	)	
(Boca Raton, Florida)	)	

To: Chief, Video Division
Media Bureau

PETITION **FOR** FURTHER RECONSIDERATION

1. Sherjan Broadcasting Co., Inc. ("Sherjan") petitions for further reconsideration of the *Memorandum Opinion and Order* in the above-captioned proceeding released November 20, 2002.[1] In that decision, the Media Bureau ("Bureau") denied reconsideration of an earlier decision to substitute DTV Channel *40 for DTV Channel *44 at Boca Raton, Florida. This channel is assigned to the School Board of Broward County ("School Board") for use by WPPB-TV, Boca Raton

2. Sherjan has maintained throughout this proceeding that the use of Channel *40 by WPPB-DT would cause prohibited interference to Sherjan's first-adjacent channel Class A Station WJAN-CA, Channel 41, Miami, Florida. The Bureau rejected Sherjan's position and ultimately accepted a showing by the School Board that based on a Longley-Rice analysis applied to geographic cells only 1 km in size instead of the default value of 2 km, WJAN-CA would receive interference to less than 0.5% of the population in its protected service area, which is considered

[1] *Amendment of Section 73.622(b), Table of Allotments, Digital Television Broadcast Stations (Boca Raton, Florida),* DA 02-3176 (M. Bur.).

to be zero interference based on whole integer rounding. The Bureau stated that a smaller cell size results in "[a]....more accurate interference calculation."'

2. Sherjan submits that if it is appropriate to rely on a smaller cell size to increase accuracy, then the Bureau must examine several cell sizes smaller than the default 2.0 km to determine the true impact of a more refined analysis. In addition, if the objective is accuracy, then Year 2000 census data must be used, rather than the 1990 data relied on by the Bureau.[3] In this particular case, it turns out that if 14 cell sizes, ranging from 0.2 km to 2.0 km, are examined,[4] the interference to **WJAN-CA** is less than 0.5% in only two out of the 14 cases: at 1.0 km and 1.8 km. Using every other cell size, the interference exceeds 0.5%. Thus reliance on data for a 1.0 km cell size is convenient for the School Board, but it is certainly not a more accurate reflection of predicted interference to **WJAN-CA.**

3. It would be arbitrary and capricious for the Bureau to allow a petitioner to rely on a non-standard cell size and then to select a convenient size that happens to yield the desired result, when the data for that size turn out to be atypical. Indeed, applying a regression analysis to the calculations for the 14 cell sizes to smooth out anomalies yields a line that shows that interference is below 0.5% using *none* of the 14 cell sizes.[5] Therefore, the Bureau must find that the allotment

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[2] *Id* at para. 8.

[3] The interference will occur in the future, not the past; so the use of 12-year old population data has no relationship to the interference avoidance that is the whole purpose of this exercise.

[4] The cell sizes are at 0.1 km increments from 0.2 km to 1.0 km and 0.2 km increments from 1.0 km to 2.0 km.

[5] The Longley-Rice results for each cell size and the results of the regression analysis are supported by the attached Engineering Statement of Roy P. Stype, III.

change at Boca Raton is predicted to cause prohibited interference to WJAN-CA, and the decision to allot DTV Channel ***40** must be rescinded.

4. Sherjan has filed a second petition for reconsideration rather than an Application for Review by the full Commission, because the Bureau has not had an opportunity to evaluate and to rule on the data for 14 different cell sizes and Year 2000 census data, so review by the Commission is premature at this point,[6] and further analysis by the Bureau is appropriate

5. In light of the foregoing, Sherjan respectfully submits that if the Bureau is prepared to accept application of the Longley-Rice method to smaller cell sizes to increase accuracy, then the Bureau must do what is reasonable to achieve the professed goal of accuracy, including basing the analysis on the most recent available population data and using a smooth curve reflecting data over several cell sizes smaller than the default 2.0 km standard. The results of such an analysis mandate that the Bureau then find that the Channel *40 DTV allotment at Boca Raton is predicted to cause prohibited interference to WJAN-CA, and the allotment must be rescinded

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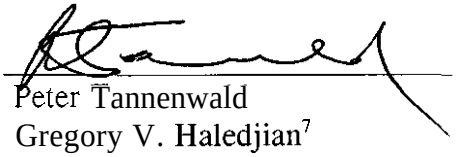
December 24. 2002

Respectfully submitted,



Peter Tannenwald
Gregory V. Haledjian[7]

Counsel for Sherjan
Broadcasting Co., Inc

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[6] *See* Sec. 1.115(c) of the Commission's Rules. It should be noted that the concept of smaller cell size was not raised in the original rule making petition or comments and was introduced by the rule making proponents for the first time at the first reconsideration stage.

[7] Admitted in Maryland; not admitted in D.C.

ENGINEERING STATEMENT IN

SUPPORT OF PETITION

FOR FURTHER RECONSIDERATION

MM DOCKET 00-138

DTV CHANNEL 40 - BOCA RATON. FL

Sherjan Broadcasting Company, Inc.
Miami, FL

December 24,2002

Prepared For: Mr. Omar Romay
Sherjan Broadcasting Company, Inc.
1520 NW 79th Avenue
Miami, FL 33126

CARL E. SMITH CONSULTING ENGINEERS

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CONTENTS

ENGINEERING AFFIDAVIT

State of Ohio)
) **ss:**
County of Summit)

Roy P. Stype, III, being duly sworn, deposes and states that he is a graduate Electrical Engineer, a qualified and experienced Communications Consulting Engineer whose works are a matter of record with the Federal Communications Commission and that he is a member of the Firm of "Carl E. Smith Consulting Engineers" located at **2324** North Cleveland-Massillon Road in the Township of Bath, County of Summit, State of Ohio, and that the Firm has been retained by the Sherjan Broadcasting Company, Inc., to prepare the attached "Engineering Statement In Support Of Petition For Further Reconsideration - MM Docket 00-138 - DTV Channel **40** - Boca Raton, FL."

The deponent states that the Exhibit was prepared by him or under his direction and is true of his own knowledge, except as to statements made on information and belief and as to such statements. he believes them to be true.

Roy P. Stype, III

Subscribed and sworn to before me on **December 24, 2002.**

Nancy A. Adams
Notary Public

NANCY A. ADAMS, Notary Public
Residence - Cuyahoga County
State Wide Jurisdiction, Ohio
My Commission Expires Sept. 5, 2006

/SEAL/

ENGINEERING STATEMENT

This engineering statement is prepared on behalf of the Sherjan Broadcasting Company, Inc., licensee of Class A Television Station WJAN-CA - Miami, Florida. It supports a Petition For Further Reconsideration in MM Docket **00-1**38 and serves to provide additional documentation that the substitution of DTV Channel **40** for DTV Channel **44** in Boca Raton, Florida will result in impermissible interference to WJAN-CA.

WJAN-CA operates in an analog mode on Channel **41** with a maximum effective radiated power of 101 kilowatts utilizing a directional antenna. This rulemaking proceeding was commenced in response to a Petition for Rulemaking tiled on behalf of a predecessor licensee of WPPB-TV - Boca Raton, Florida, which operates in the analog mode on Channel 63, and proposed to substitute D N Channel **40** for DTV Channel **44** in Boca Raton for use by paired DTV station WPPB-DT. WJAN-CA actively opposed this proposed DTV channel substitution based on the fact that the proposed Channel **40** DTV facilities failed to provide WJAN-CA the protection consideration to which it was entitled by virtue of its status as a Class A TV facility.

On April 22, 2002, the FCC released a Report and Order in this proceeding, which granted the proposed DTV channel substitution over WJAN-CA's objections. In attempting to justify the grant of this channel substitution, this Report and Order noted in Footnote 6 that an independent analysis using the methodology outlined in OET Bulletin 69' determined that the predicted interference to WJAN-CA from the proposed

'This OET 69 analysis was conducted utilizing a 2 kilometer cell size and population data from the 1990 U. S. Census.

Channel 40 DTV facilities was 1.02%. It then went on to incorrectly claim that this was less than the 2% de minimis interference permitted in this situation and that, as a result, the proposed Channel 40 DTV facilities complied with the applicable protection requirements to WJAN-CA.

In reality, however, the applicable interference criteria in this situation does not permit de minimis interference to WJAN-CA but, instead, is based upon a 0.5% rounding tolerance, which does not permit the creation of any new interference when rounded to the nearest 1%. On May 22, 2002, WJAN-CA filed a *Petition for Reconsideration* in this proceeding pointing out that the FCC had applied the incorrect interference standard in evaluating this proposed DTV channel substitution and that, based on the FCC's own calculations, it failed to provide the required protection to WJAN-CA and should have been denied. The licensee of WPPB-TV filed an opposition noting that when a smaller cell size of 1 kilometer is employed in the OET 69 analysis,[2] the predicted interference to WJAN-CA from the proposed Channel 40 DTV facilities is reduced to 0.42%, which complies with the 0.5% rounding tolerance permitted in this situation.

On November 20,2002, the FCC released a *Memorandum Opinion and Order* in this proceeding upholding their original grant of this DTV channel substitution based on the revised OET 69 study utilizing a 1 kilometer cell size which had been submitted by the licensee of WPPB-TV. The cited rationale for this action was the fact that the smaller cell size employed in the WPPB-TV analysis was more accurate and that such a decision should be based on the most accurate available data which, it was claimed,

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[2] This OET 69 analysis continued to utilize population data extracted from the 1990 U. S. Census.

shows that the predicted interference to WJAN-CA does not exceed the permitted 0.5% rounding tolerance.

In reality, however, the interference calculations utilized in justifying the decision to uphold the grant of this DTV channel substitution do not represent the most accurate prediction of interference to WJAN-CA from the proposed Channel **40** DTV facilities. It should first be noted that these interference calculations are based on twelve year old census block data extracted from the 1990 **U.** S. Census. The use of updated census block data from the much newer 2000 U. S. Census in conducting this OET 69 analysis will provide a much more accurate representation of the predicted interference to WJAN-CA,[3] particularly in light of the fact that the population within WJAN-CA's protected service area increased by approximately 240,000 persons (14%) in the ten year span between these two censuses. Additionally, as shown below in more detail, the selection of a single reduced cell size for this analysis can result in anomalous results which can yield an improper determination as to whether the applicable interference criteria have been met.

In order to more accurately evaluate the predicted interference to WJAN-CA from the proposed WPPB-DT Channel **40** DTV facilities, a series of analyses were conducted utilizing a version of the FCC's "FLR" computer program which has been modi-

[3] In the January 19,2001 Report and Order and Further Notice of Proposed Rulemaking in MM Docket 00-39, the FCC specifically declined to shifl from 1990 census data to 2000 census data in utilizing the OET 69 methodology to conduct interference calculations to DTV broadcast facilities because doing so would have required that new baseline values be calculated for all DTV allotments for use in conducting interference analyses to these DTV broadcast facilities. Since WJAN-CA, as a Class A TV facility, however, has no such published baseline service value for use in this sort of Calculations and instead utilizes a service value calculated as part of each individual OET 69 interference analysis as its baseline value for these calculations, the administrative convenience rationale advanced by the FCC for not utilizing 2000 census data to evaluate interference to DTV broadcast facilities has no significance in this situation. Thus, this decision by the FCC should not serve as an impediment to the use of 2000 census data in this situation in order to achieve the most accurate possible results

fied to run on a Windows 98/Windows NT platform and recompiled under the Compaq (DEC) Visual Fortran compiler. This implementation of the "FLR program, when run utilizing the same 1990 census data and 2 kilometer cell size as was employed by the FCC to generate the benchmark values contained in Appendix B of the December 18, 1998 Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders, yielded results essentially identical to those found in Appendix B. Thus, it is felt that this implementation of the 'FLR" program faithfully reproduces the results obtained by the FCC in their implementation of this program.

These analyses utilized population data from the 2000 U. S. Census, a standard terrain profile step size of 1 kilometer[4] and various cell sizes varying from 0.2 kilometers to 2.0 kilometers.[5] Table 1.0 contains a detailed tabulation of the results of these analyses at these varying cell sizes. As can be seen from an examination of this data, there is fairly substantial variation in the results of these analyses between different cell sizes, with no apparent correlation between the results of these runs and the cell size which was employed. It should be noted however, that of the fourteen cell sizes for which an analysis was conducted, only two of them (1.0 kilometers and 1.8 kilometers) yield a predicted interference level less than the maximum permitted value of 0.5%.

'Given the extremely flat nature of the terrain in the Miami area, it is unlikely that the use of a smaller terrain profile step size would result in any discernible difference in the results of these analyses.

'The average size of a census block (2000 U. S. Census) within the WJAN-CA protected service area is 0.040 square kilometers, which corresponds to the area within a cell 0.2 kilometers on a side. As a result, no analysis was conducted for cell sizes of less than 0.2 kilometers because it appears that the use of cell sizes smaller the size of the average census block in the area being studied will introduce additional errors into this analysis. Furthermore, the amount of computer time required for runs with smaller cell sizes becomes extraordinarily unwieldy.

In order to attempt to establish a correlation between the cell size utilized in the analysis and the predicted interference to WJAN-CA, a linear regression analysis was conducted on this data utilizing the least squares regression methodology. The results of this linear regression analysis, along with the raw data which was included in this regression analysis is presented in graphical form in Figure 1.0. As shown in this figure, this data appears to correlate fairly well with this regression analysis, particularly for the smaller cell sizes which were evaluated. This figure also shows that, based on the results of this regression analysis, the predicted interference to WJAN-CA will exceed the permitted 0.5% rounding tolerance at any cell size, ranging from 0.6% as the cell size approaches zero to ***0.84%*** at a cell size of **2** kilometers.

Based on the above information, when 2000 **U. S.** Census data is employed to achieve the most accurate possible results, the predicted interference to WJAN-CA from DTV Channel **40** in Boca Raton will exceed the maximum permitted value of 0.5%, regardless of the cell size employed in the analysis. As a result, the substitution of DTV Channel ***40*** for DTV Channel ***44*** in ***Boca*** Raton, Florida in **this** proceeding must be vacated in order to insure that WJAN-CA receives the protection to which it is entitled by virtue of its status **as** a Class A TV facility.

TABLE 10

WJAN-CA OET-69
INTERFERENCE CALCULATIONS
12000 **CENSUS DATA)**
Sherjan Broadcasting Company, Inc.
Miami, FL

Cell Size (km)	Total 74 dBu Population	Present Interference	Present Interference Free	Proposed Interference Free	New Interference From WPPB-DT	
					Population	Percent
0.2	1,912,506	6	1,912,500	1,899,776	12,724	0.67%
0.3	1,912,075	6	1,912,069	1,899,009	13,060	0.68%
0.4	1,911,779	0	1,911,779	1,900,175	11,604	0.61%
0.5	1,911,632	0	1,911,632	1,897,282	14,350	0.75%
0.6	1,915,240	0	1,915,240	1,899,859	15,381	0.80%
0.7	1,916,544	0	1,916,544	1,903,989	12,555	0.66%
0.8	1,909,831	0	1,909,831	1,896,626	13,205	0.69%
0.9	1,916,624	6	1,916,618	1,906,175	10,443	0.54%
1.0	1,915,092	0	1,915,092	1,906,434	8,658	0.45%
1.2	1,908,596	0	1,908,596	1,894,814	13,782	0.72%
1.4	1,920,137	0	1,920,137	1,902,646	17,491	0.91%
1.6	1,914,074	0	1,914,074	1,893,169	20,905	1.09%
1.8	1,925,443	0	1,925,443	1,921,458	3,985	0.21%
2.0	1,925,232	0	1,925,232	1,901,881	23,351	1.21%

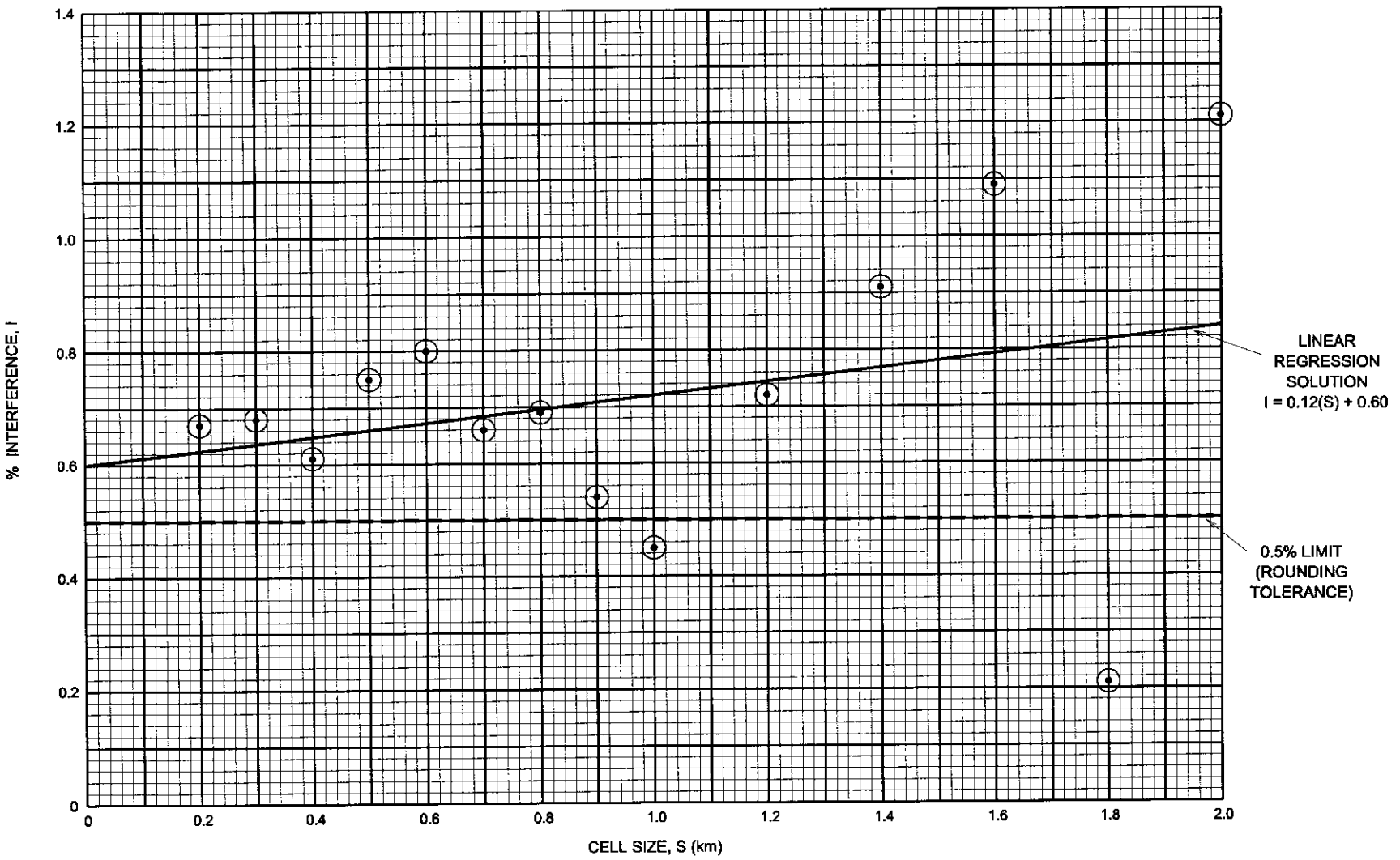

FIG. 1.0

ANALYSIS OF WJAN-CA OET-69
INTERFERENCE CALCULATIONS
(2000 CENSUS DATA)

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MIAMI, FL

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CERTIFICATE OF SERVICE

I, Daniella Mattioli Knight, do hereby certify that I have, this 24th day of December, 2002, caused a copy the foregoing "Petition for Further Reconsideration" to the following:

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Counsel for Guenter Marksteiner

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